



geraniums

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Geraniums are not really hard to grow. Like all other garden plants, however, they do require certain conditions. But these are fairly easy to provide, and the reward is bountiful.

The geraniums of today have taken on a new look. Modern breeding methods have produced plants with a wide variety of flower colors, better shape, greater vigor, and resistance to adverse weather. You can now obtain culture-indexed cuttings that are free from the pathogens of bacterial and virus diseases. As a result of the development of true breeding lines you can now grow hybrids from seed and forget about those cuttings on the kitchen window sill. Sometimes, of course, you may want to grow a neighbor's special delight, and then you do need to know how to handle cuttings.

Most geraniums grown in Canada belong to the genus *Pelargonium*, rather than to the true *Geranium* genus. For the purpose of this article, however, they are called by the more usual plantsman's name, *geranium*.

A commonly grown geranium is the Garden Geranium (*Pelargonium hortorum*). It exists in a number of forms, including many dwarf plants and several varieties with variegated leaves. Some other species merit mention. The Ivy-leaved Geranium (*P. peltatum*) is ideal for use in hanging pots, baskets, and patio tubs, because of its trailing habit and small leaves. The Martha Washington, or Lady Washington, Geranium (*P. domesticum*) is a good indoor house plant. The Scented-leaved Geranium (*P. capitatum* and other species) has leaves with a delightful roselike

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Even a small number of geraniums provide a very attractive and colorful summer display. For this purpose the simplest course is to buy plants of the desired color from a reputable greenhouse or garden center or from a florist whose supply comes from a specialist who grows cultured stock. The number of available varieties depends on public demand. The following is a list of some cultivars and their colors. In tests at Ottawa, they have proved well worth growing.

Appleblossom, light phlox pink
to rose

Blaze, turkey red

Blueblood, rose bengal over
neyron rose

Cardinal, signal red

Crimson Fire, currant red

Eleanor, neyron rose

Genie Irene, rhodamine pink
to phlox pink

Hildegard, mandarin red

Improved Ricard, Dutch vermillion

Penny Irene, empire rose

Pink Fiat, carmine

Quest, rose red to tyrian purple

Sincerity, vermillion

Skylark, carmine rose

Summer Cloud, white

Toreador, signal red

PLANTS OUTDOORS

Geraniums grow and bear flowers in most soils and under varied culture. The plants respond to good gardening practices.

To grow plants outdoors, set them in friable soil that is porous enough to provide good drainage. To improve the soil use humus from a compost heap, leaf mold from the woods, or commercial peat moss. Commercial fertilizers such as 6-9-6 may be worked into the soil or added as a light top dressing. If you grow geraniums in patio pots, tubs, or porch boxes, use well-enriched soil because root growth is restricted. Most containers, if well-drained, dry out quickly. Water when the soil surface is dry and before the plants wilt. To maintain good growth apply a soluble fertilizer regularly every 2 to 3 weeks. Such fertilizers can be obtained from most garden stores. Be sure to follow the manufacturer's directions on the package.

In the garden, the plant beds should be cultivated, fertilized, and leveled before planting time. Plant the geraniums only after risk of frost is past. Space them 18 inches (45 cm) apart at least. When the plants need water, apply it freely. Avoid wetting the foliage, especially on hot days, as this practice may cause leaf scorch or spread diseases.

PLANTS FROM CUTTINGS

In late August or early September, cut off short-jointed tip shoots, 4 to 6 inches (10 to 15 cm) long, just below a node. Break off the leaves at the node and stick the cuttings in a mixture of half peat moss and half sharp sand. Insert the cuttings just deep enough to keep them upright. To speed up the rooting process you may first dip the base of the cuttings in a rooting hormone powder. Put the pot of cuttings in a well-sealed polyethylene bag, and keep it near bright light, but not in the sun, in a room where the temperature is 15 - 18°C. The cuttings should root in 4 to 5 weeks. Plant them in separate pots containing a mixture of soil, peat moss, and sand. When the plants are growing well, fertilize them every week. Use 20-20-20 at 1.2 g to 1 litre of water (1 oz/5 gal). Note that one bucket contains about 10 litres. Keep the soil moist by watering often, but do not allow the soil to be constantly wet.

PLANTS FROM SEED

About 4 months are needed to produce flowering plants from seed, so you should plant the seeds not later than early February. Use clean pots, pans, or wooden boxes. Place coarse material, such as pieces of broken pots, at the bottom for drainage. Buy a package of sterilized soil, put it in the container, and firm it to a level about 1/2 inch (12 mm) below the rim. Sow the seeds thinly over the surface and cover them with a mixture of sharp sand and peat moss. Place the container in a shallow pan of water, and remove it when the surface is wet. Cover the container with polyethylene, and place it in a temperature of 70° to 75°F (21° to 24°C). As soon as the seeds germinate, remove the polyethylene and put them in a room that has good ventilation and a great deal of light.

When the first true leaves develop, transplant the seedlings into small peat or clay pots. Use a mixture of soil, peat, and sharp sand in a proportion that allows for adequate drainage, and add 3 g of 20% superphosphate for each litre of mixture (3 oz/cu ft); to determine the number of litres, measure the pot volume in cm³ and divide by 1000. Fertilize and water as you would for plants grown from cuttings.

Carefree strain, in 13 separate colors, and New Era strain, in 10 separate colors, both from seed, have grown vigorously and flowered profusely at Ottawa.

WINTER-FLOWERING INDOOR PLANTS

To grow winter-flowering houseplants take stem cuttings during the summer and early fall from plants growing in the garden. The cuttings will provide well-rooted plants by the time winter arrives.

Young plants do well when they are given supplementary light, and high light intensity promotes flower development. Use the maximum amount of available light. If no supplementary electric light can be had, then a heated sunroom, glassed porch, or a small heated greenhouse will supply this need.

Martha Washington Geraniums, however, need cool temperatures and more than 14 hours of light each day. Low light intensity and days with less than 13 hours of light slow down flowering and cause late blooming unless extra light is supplied. Take cuttings in the same way as for garden geraniums. One-year-old plants, cut back, repotted, and then grown on again flower better than plants grown from new cuttings. Geranium plants from the garden, or last winter's house plants, can be potted up or repotted to provide winter-flowering indoor plants. Such plants require a rest period when growth slows down, though the leaves stay on the plants. The rest period should be from late October to February, when the days are short.

However, you must not expect a potted geranium to last indefinitely and still be attractive. Plants over a year old get spindly and do not have many flowers. You should take cuttings from them, and throw the old plants away. If you want to save a special garden geranium dig it up in the fall and keep it indoors until you can take cuttings from it.

STORING PLANTS OVER WINTER

Dig up the plants before the first heavy frost in the fall. Cut them back quite severely, pack them close together in deep boxes, and cover the roots well with light garden soil. Put them in a dimly lit storage room where the temperature is 40°



to 45°F (4° to 7°C). Water the soil well after you put the plants in the boxes. During the winter water the soil occasionally to prevent the plants from shriveling. In early April, pot the surviving plants in fertile soil, water them well, and place them in good light. They should then grow fairly quickly and develop into large, well-branched plants.

DISEASES

Geraniums are susceptible to injury from several bacterial, virus, and fungus diseases. Whiteflies and aphids may also cause damage.


Botrytis blight is a disease that attacks geraniums, especially plants grown in cool, moist places. The infected parts are brown and water-soaked, and later are covered with gray brown masses of fungus spores. To control this disease, reduce the humidity and keep the plants fairly dry. Space the plants to permit freer air circulation around them.

Black stem rot is a serious disease of young cuttings. The rot starts at the base of the plant and moves toward the tips. The stems become slimy and coal black, and the plant dies rapidly. The best way to control this disease is to discard infected plants.

Take cuttings from healthy plants only, root them in new rooting medium, and plant them in sterilized soil.

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